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60,130-1829; 00MRA0373/0382



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Blume et al.
SERIAL NO.: 10/635,130
FILED: August 6, 2003
ART UNIT: 3634
EXAMINER: Strimbu, Gregory J.
FOR: Door Panel Assembly

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Dear Sir:

Appellant submits this Appeal Brief pursuant to the Notice of Appeal filed October 13, 2005. Enclosed is a check for the appeal brief fee. Any additional fees or credits may be charged or applied to Deposit Account No. 50-1482 in the name of Carlson, Gaskey & Olds.

REAL PARTY IN INTEREST

The real party in interest is Meritor Light Vehicle Systems - France, assignee of the present invention.

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RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, interferences or judicial proceedings related to this appeal, or which may directly affect or may be directly affected by, or have a bearing on, the Board's decision in this appeal.

STATUS OF CLAIMS

Claims 21-42 are pending and appealed. Claims 21, 24-29, and 41-42 are rejected. Claims 22, 23, and 30-40 have been withdrawn as being drawn to a non-elected species, pending allowance of a generic claim.

STATUS OF AMENDMENTS

All amendments and responses have been entered.

SUMMARY OF CLAIMED SUBJECT MATTER

The subject invention relates to an improved alignment arrangement for a window lifting mechanism.

Figure 1 shows a door panel assembly 10 including a window regulator housing 12, a door panel 14 and a power mechanism in the form of a window regulator motor 16. See page 3, lines 14-16 Replacement Specification.

The arrangement shown in Figure 1 enables power generated by the window regulator motor 16 to be transferred across the door panel 14 to the window regulator to enable raising and lowering of the window. See page 4, lines 10-12 Replacement Specification.

The three components shown in Figure 1 can be aligned, according to the present invention, in various ways as shown in figures 2 to 6. Figure 2 shows that the door panel 14 includes a pressed feature, in this case a frustoconical cone 18. Window regulator housing 12 includes a corresponding frustoconical recess 20 and motor 16 includes a corresponding frustoconical projection 22. See page 4, lines 17-20 Replacement Specification.

The engagement between recess 20 and the frustoconical cone 18 on the first side 24 of the door panel 14 provides alignment of the window regulator housing 12 with the door panel 14. Engagement between the frustoconical projection 22 and the frustoconical cone 18 on the second side 26 of the door panel 14 provides alignment between the motor 16 and door panel 14. See page 5, lines 1-6 Replacement Specification.

By providing an accurate alignment method between the motor 16 and door panel 14, and by providing a further accurate alignment method between the window regulator housing 12 and door panel 14, it is possible to accurately align the window regulator motor 16 with the window regulator housing 12. See page 5, lines 7-10 Replacement Specification.

As shown in Figure 2, the window regulator housing 12, door panel 14 and motor 16 each include a hole 28, 30 and 32 respectively through which passes a bolt 34, on the end of which is secured a nut 36. Tightening of the nut 36 and bolt 34 ensures that the window regulator housing 12, door panel 14 and motor 16 are tightly clamped together and the nut 36 and bolt 34 (together

with other nuts and bolts) ensure that the window regulator housing 12, door panel 14 and motor 16 are fixed relative to each other. See page 5, lines 11-16 Replacement Specification.

Independent method claim 21 recites a method of assembling a window lifting mechanism to a vehicle door panel 14 including a first alignment member formed on the vehicle door panel on one side of the vehicle door panel and a second alignment member formed on the vehicle door panel on an opposite side of the vehicle door panel comprising the steps of:

(a) aligning a window regulator housing 12 relative to the vehicle door panel via the first alignment member (page 5, lines 1-3 Replacement Specification);

(b) aligning a power mechanism 16 relative to the vehicle door panel via the second alignment member (page 5, lines 4-6 Replacement Specification); and

(c) securing the window regulator housing and power mechanism to the vehicle door panel (page 5, lines 11-16 Replacement Specification).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

- A. Claim 42 stands rejected under 35 U.S.C. 112, second paragraph.
- B. Claims 21 and 42 stand rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,185,873 to Saito.
- C. Claims 24-29 and 41 stand rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,185,873 to Saito in view of US Patent No. 1,986,981 to Ross.

ARGUMENT

A. 35 U.S.C. 112, Second Paragraph, Rejection

Claim 42 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite with regard to the language “to hold.” Specifically, the examiner argues that the recitation of “to hold” is indefinite because “it is unclear how the housing or the power mechanism cannot be held and at the same time be fixed relative to the door panel during assembly.” Page 3, lines 24-26 July 13, 2005 Office Action.

Appellant respectfully asserts that the meaning of claim 42 is clear. Claim 42 recites the step of “assembling one of the window regulator housing and power mechanism to the vehicle door panel without having to hold the other of the window regulator housing and power mechanism in place relative to the one of the window regulator housing and power mechanism.”

The problem that appellant was seeking to solve relates to the difficulty of aligning a housing and power mechanism relative to each other on opposite sides of a door panel, such that each component can be attached to the door panel. Traditionally, the housing was aligned on one side of the door panel and, while holding the housing in place, a worker simultaneously held the power mechanism in place relative to the door panel and housing, such that the housing and power mechanism could be assembled onto the door panel. This process is difficult and time consuming.

Appellant’s invention provides first and second alignment members that are used to align the housing and power mechanism to the door panel. These alignment members allow the

housing and power mechanism components to be assembled onto the door panel without having to simultaneously hold both components.

Such an arrangement of fixing of the window regulator housing 12 relative to the door panel 14 means that the person assembling the various components can initially assemble the window regulator housing 12 relative to the door panel 14 and then subsequently, and without having to hold the window regulator housing 12 in place, can assemble the motor 16 onto the door panel 14. It is clear that a similar arrangement of fixings can be used to secure the door panel 14 and window regulator motor 16.” Paragraph [37] Replacement Specification.

Thus, for the reasons set forth above, appellant respectfully asserts that claim 42 is not indefinite and requests that the rejection of claim 42 under 35 U.S.C. 112, second paragraph, be withdrawn.

B. 35 U.S.C. 103(a) Rejection- Saito

Claims 21 and 42 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Saito alone.

Claim 21

Claim 21 recites:

A method of assembling a window lifting mechanism to a vehicle door panel including a first alignment member formed on the vehicle door panel on one side of the vehicle door panel and a second alignment member formed on the vehicle door panel on an opposite side of the vehicle door panel comprising the steps of:

(a) aligning a window regulator housing relative to the vehicle door panel via the first alignment member;

(b) aligning a power mechanism relative to the vehicle door panel via the second alignment member; and

(c) securing the window regulator housing and power mechanism to the vehicle door panel.

The examiner argues that Saito discloses a door panel 5 having a first alignment member 5b, 11a formed on one side of the vehicle door panel, and a second alignment member 5c formed on an opposite side of the vehicle door panel. The examiner further argues that Saito discloses a window regulator housing 8 that is aligned relative to the door panel via the first alignment member 5b, 11a, and a power mechanism 7 aligned relative to the door panel via the second alignment member 5c. Appellant respectfully disagrees with this interpretation of Saito.

Saito discloses an inner door panel 5 having a recessed portion 5a to accommodate the motor 7. The recessed portion 5a includes three mounting bores 5b at positions that correspond to positions of bolts 11a-11c on the base 8 of the regulator 6. The recessed portion 5a also includes a through hole 5c that is located at a position corresponding to projecting portion 14c of the housing 14 of the motor 7. See column 5, lines 17-23.

The examiner's first 5b, 11a and second 5c alignment members are not formed on opposite sides of the door panel from each other as defined in claim 21. Element 11a is a bolt that is part of the base 8 of the regulator 6, and thus is not formed as part of the door panel. Also, elements "5b" and "5c" of Saito are holes that are cut through the entire thickness of door panel. These holes are not formed on opposite sides of the door panel from each other.

Further, through hole 5c, which the examiner argues corresponds to the claimed "second alignment member," cannot be used to align the motor 7 relative to the door panel 5. The hole

5c merely serves as an opening to allow a portion of the motor 7 to extend through the door panel 5. An elastic member 21 is required to close off the remaining portion of the hole 5c (see Figure 4). “[R]ecessed portion 5a includes the through hole 5c, which is located at a position corresponding to the projecting portion 14c of the housing 14. The diameter of the through hole 5c is larger than the outer diameter of the projecting portion 14c and smaller than the diameter of the elastic member 21.” Col. 5, lines 22-27.

Thus, the hole 5c cannot serve to align the motor 7 to the door panel 5. Instead, the alignment of the motor 7 and the regulator 6 relative to the panel is accomplished by the bolts 11a-11c, which are not formed as part of the door panel 5.

Appellant respectfully asserts that Saito does not disclose, suggest, or teach all of the features set forth in claim 21, and requests that the rejection be reversed.

Claim 42

Claim 42 includes the step of assembling one of the window regulator housing and power mechanism to the vehicle door panel without having to hold the other of the window regulator housing and power mechanism in place relative to the one of the window regulator housing and power mechanism.

Saito does not disclose this feature. The motor 7 and the window regulator 6 must be simultaneously held in place relative to the door panel 5 so that the bolts 11a-11c can be properly aligned with the openings 14e in the motor 7. Because through hole 5c is not capable of aligning the motor 7 to the door panel 5, the window regulator 6 must be held on one side, and the motor

7 must be held on the opposite side, such that the bolts 11a-11c can be aligned and inserted into the openings 14e.

Thus, for the reasons set forth above, appellant respectfully asserts that Saito does not disclose, suggest, or teach the features of claim 42, and requests that the rejection be reversed.

C. 35 U.S.C. 103(a) Rejection- Saito and Ross

Claims 24-29 and 41 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Saito in view of Ross.

Claims 24, 28-29, and 41

Claim 24 recites the step of forming a single contiguous feature on the vehicle door panel that defines both the first and second alignment members. Saito clearly does not disclose, suggest, or teach this feature. Further, the examiner recognizes that Saito does not disclose this feature as separate, discrete, elements of Saito have been described as corresponding to the claimed first and second alignment members.

Ross also does not disclose, suggest, or teach the features of claim 24. The examiner argues that Ross discloses a means for fastening two components 2, 3 together via panel B in Figure 2, and that panel B includes a frustoconical projection b. Appellant respectfully asserts that this is not a reasonable interpretation of Ross.

Elements 2 and 3 are not components, such as the claimed housing and power mechanism that are attached to a door panel. Elements 2 and 3 are merely spacer washers. Ross discloses a

method for attaching metal sheets A and B together in a spaced relationship. Washer 3 is positioned between the sheets A and B to provide the desired spacing. A second washer 2 is positioned on the end of bolt 1 such that a nut 1b can be tightened to secure the sheets A and B together. Thus, Ross does not disclose forming a single contiguous feature on a vehicle door panel to form first and second alignment members that are used to align a housing and a power mechanism on opposite sides of the door panel. Further as mentioned above, Saito does not disclose this feature. As neither reference discloses the claimed features, the combination of references fails to disclose, suggest, or teach the claimed invention.

Further, there is no motivation or suggestion to modify Saito in the manner argued by the examiner. When it is necessary to select elements from different references in order to form the claimed invention, there must be some suggestion or motivation to make the selection. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. The extent to which such suggestion must be explicit in, or referred from, the references, is decided on the facts of each application in light of the prior art and its relationship to the claimed invention. It is impermissible to engage in a hindsight reconstruction of the claimed invention, using appellant's structure as a template and selecting elements from the references to fill the gaps. The references themselves must provide some teaching whereby appellant's combination would have been obvious. In re Gorman, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991).

The examiner argues that it would have been obvious to “provide Saito, with a fastening means, as taught by Ross, to prevent shearing or tearing of the door panel.” Page 5, lines 3-4 July 13, 2005 Office Action. Appellant respectfully disagrees. Claim 24 is directed to the alignment of the housing and the power mechanism relative to the door panel, not to the fastening of the components to the door panel. Ross does not disclose any type of structure that is formed on a door panel that can be used to align two different components relative to opposite sides of a door panel. Instead, Ross is directed to a method for fastening two metal sheets together in a spaced relationship.

Saito sought to provide a mounting structure and a method of mounting that reduced cost and simplified assembly. Saito accomplished this by arranging a regulator having a plurality of bolts in a space between inner and outer door panels, whereby the motor is connected to the bolts of the regulator to fix both the motor and regulator to the inner panel.

The examiner is arguing that the components in Saito should be fastened to the panel with the fastening means taught by Ross. First, as discussed above, Ross discloses attaching two metal sheets A and B to each other in a spaced relationship, and does not disclose attaching two components such as a housing and a power mechanism to opposite sides of a panel. Second, Saito already provides a unique configuration for mounting the regulator and motor to a door panel.

There is nothing in Saito that would have led one of ordinary skill in the art to believe that Saito’s mounting configuration was in any way deficient for Saito’s purposes or was in need of modification, especially as Saito’s motor was specifically designed to achieve a beneficial

mounting structure within a door panel assembly. The examiner's modification would clearly defeat the benefits achieved by Saito with regard to the mounting configuration.

Further, the examiner has argued that the motivation for modifying Saito is to prevent shearing or tearing of the door panel. This is not supported by the references. There is no indication set forth in Saito of the existence of a problem relating to tearing or shearing of the door panel.

As discussed above, the examiner has argued that it would be obvious to use the fastening means of Ross to replace the fastening means of Saito. The examiner's proposed modification would require a complete reconfiguration of the door panel to include projections, and reconfiguration of the motor and window regulator housing to include corresponding formed features. Thus, as there is no indication that the Saito fastening system is insufficient for Saito's purposes or is in need of modification, such an extensive reconfiguration of three major components (door panel, motor, and window regulator housing) would not be obvious. Further, if Saito were modified to replace the examiner's alignment members 11a-11c, 5c, 5b with the fastening elements taught by Ross, this would eliminate the use of weld bolts 11a-11c, which are an important feature of the Saito invention. The examiner's proposed modification cannot render the prior art unsatisfactory for its intended purpose and cannot change the principle of operation of the base reference. See MPEP 2143.01. One of ordinary skill in the art would have found no reason, suggestion, or incentive for attempting to combine these references so as to arrive at the subject matter of claim 24 other than through the luxury of hindsight accorded one who first viewed appellant's disclosure.

Thus, for the many reasons set forth above, appellant respectfully asserts that rejection of claims 24, 28-29, and 41 under 35 U.S.C. 103(a) based on the combination of Saito and Ross is improper, and requests that the rejection be reversed.

Claim 25

Claim 25 recites the step of forming the single contiguous feature as a projection on one of the one side or the opposite side of the vehicle door panel, and forming a recess on the other of the one side or the opposite side of the vehicle door panel wherein one of the first alignment member and second alignment member comprises the projection and the other of the first alignment member and second alignment member comprises the recess.

For the reasons set forth above with regard to claim 24, there is no motivation or suggestion to modify Saito with the teachings of Ross in the manner proposed by the examiner. Further, the combination of Saito and Ross does not disclose, suggest, or teach the features of claim 25.

Ross discloses metal sheets A and B that are fastened together in a spaced relationship via washers 2, 3. Washer 3 is positioned between the sheets A and B to provide the desired spacing. A second washer 2 is positioned on the end of bolt 1 such that a nut 1b can be tightened to secure the sheets A and B together. The projection b does not serve as any type of alignment member for a component relative to the metal sheets A, B. Projection b in Figure 2 of Ross certainly does not provide first and second alignment members for two different components on opposing sides of a door panel.

Appellant respectfully asserts that the rejection of claim 25 is improper and requests that the rejection be withdrawn.

Claim 26

Claim 26 further includes the step of forming a first corresponding alignment member on the window regulator housing to cooperate with one of the projection and recess and forming a second corresponding alignment member on the power mechanism to cooperate with the other of the projection and recess.

For the reasons set forth above with regard to claim 24, there is no motivation or suggestion to modify Saito with the teachings of Ross in the manner proposed by the examiner. Further, the combination of Saito and Ross does not disclose, suggest, or teach the features of claim 26.

Ross does not disclose forming a window regulator housing or power mechanism with corresponding alignment members to cooperate with a projection and recess formed as a single contiguous feature on the vehicle door panel. Saito also does not disclose modifying a window regulator housing and power mechanism with one of a projection and recess that would cooperate with a corresponding projection and recess formed on a door panel. The only teaching of modifying a window regulator and power mechanism in such a manner is found in appellant's disclosure.

Appellant respectfully asserts that the rejection of claim 26 is improper and requests that the rejection be withdrawn.

Claim 27

Claim 27 further includes the steps of forming the projection as a frustoconical projection and forming a corresponding frustoconical surface on the first and second corresponding alignment members such that the frustoconical surfaces engage opposing sides of the frustoconical projection.

For the reasons set forth above with regard to claim 24, there is no motivation or suggestion to modify Saito with the teachings of Ross in the manner proposed by the examiner. Further, the combination of Saito and Ross does not disclose, suggest, or teach the features of claim 27.

As discussed above, neither Saito nor Ross disclose modifying a window regulator housing or power mechanism to include one of a projection or recess that corresponds to a projection formed on a vehicle door panel. As such, neither Saito nor Ross discloses modifying a window regulator housing or power mechanism to include a frustoconical shape.

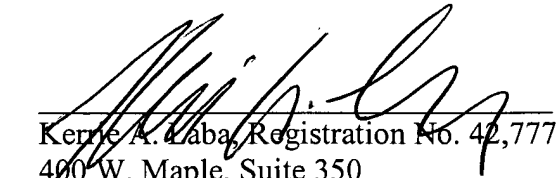
Appellant respectfully asserts that the rejection of claim 27 is improper and requests that the rejection be withdrawn.

CONCLUSION

For the reasons set forth above, the rejection of all claims is improper and should be reversed. Appellant earnestly requests such an action.

Respectfully submitted,

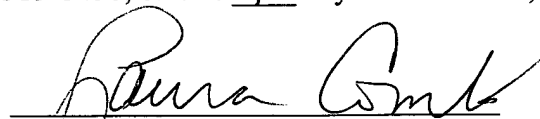
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Dated: December 7, 2005

CERTIFICATE OF MAIL

I hereby certify that the enclosed Appeal Brief is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 7 day of December, 2005.


Laura Combs

CLAIMS APPENDIX

21. A method of assembling a window lifting mechanism to a vehicle door panel including a first alignment member formed on the vehicle door panel on one side of the vehicle door panel and a second alignment member formed on the vehicle door panel on an opposite side of the vehicle door panel comprising the steps of:

(a) aligning a window regulator housing relative to the vehicle door panel via the first alignment member;

(b) aligning a power mechanism relative to the vehicle door panel via the second alignment member; and

(c) securing the window regulator housing and power mechanism to the vehicle door panel.

22. The method as defined in claim 21 wherein step (c) further comprises fixing the window regulator housing and power mechanism to the vehicle door panel independently from the first and second alignment members.

23. The method as defined in claim 21 wherein step (c) further comprises fixing the window regulator housing and power mechanism to the vehicle door panel via the first and second alignment members.

24. The method as defined in claim 21 further including the step of forming a single contiguous feature on the vehicle door panel that defines both the first and second alignment members.

25. The method as defined in claim 24 further including the step of forming the single contiguous feature as a projection on one of the one side or the opposite side of the vehicle door panel, and forming a recess on the other of the one side or the opposite side of the vehicle door panel wherein one of the first alignment member and second alignment member comprises the projection and the other of the first alignment member and second alignment member comprises the recess.

26. The method as defined in claim 25 further including the step of forming a first corresponding alignment member on the window regulator housing to cooperate with one of the projection and recess and forming a second corresponding alignment member on the power mechanism to cooperate with the other of the projection and recess.

27. The method as defined in claim 26 further including the steps of forming the projection as a frustoconical projection and forming a corresponding frustoconical surface on the first and second corresponding alignment members such that the frustoconical surfaces engage opposing sides of the frustoconical projection.

28. The method as defined in claim 24 further including the steps of forming the single contiguous feature in a pressing operation, and forming a fixing hole in at least one of the first alignment member and the second alignment member for securing one of the window regulator housing and the power mechanism to the vehicle door panel in which the fixing hole is contiguous with the single contiguous feature formed in the pressing operation.

29. The method as defined in claim 21 further including the step of forming a fixing hole in at least one of the first alignment member and the second alignment member for securing one of the window regulator housing and the power mechanism to the vehicle door panel.

30. The method as defined in claim 21 further including the step of forming at least one of the first or second alignment members as a transversely extending tab formed in the vehicle door panel.

31. The method as defined in claim 30 further including the step of forming both of the first and second alignment members as transversely extending tabs.

32. The method as defined in claim 31 further including the steps of forming a first stepped recess to define a first engagement surface in the window regulator housing, engaging one of the transversely extending tabs with the first engagement surface, forming a second stepped recess to define a second engagement surface in the power mechanism, and engaging the other of the transversely extending tabs with the second engagement surface.

33. The method as defined in claim 21 further including the step of forming at least one of the first and second alignment members as a dowel secured to and projecting outwardly from the vehicle door panel.

34. The method as defined in claim 33 further including the steps of forming both the first and second alignment members as a single dowel having first and second ends projecting outwardly from opposing sides of the vehicle door panel, forming a first opening in the window

regulator housing, forming a second opening in the power mechanism, inserting the first end of the dowel in the first opening, and inserting the second end of the dowel in the second opening.

35. The method as defined in claim 34 further including the step of threadably attaching the dowel only to the vehicle door panel.

36. The method as defined in claim 35 further including the steps of threadably attaching a first fastening element to the first end of the dowel to secure the window regulator housing to the vehicle door panel and threadably attaching a second fastening element to the second end of the dowel to secure the power mechanism to the vehicle door panel.

37. The method as defined in claim 33 further including the steps of forming the first alignment member as a first dowel secured to and projecting outwardly from one side of the vehicle door panel, forming the second alignment member as a second dowel secured to and projecting outwardly from the opposite side of the vehicle door panel where the first and second dowels are laterally spaced apart from each other.

38. The method as defined in claim 37 further including the steps of inserting the first dowel through a first opening formed in the window regulator housing, threadably attaching a first fastening element to the first dowel to secure the window regulator housing to the vehicle door panel, inserting the second dowel through a second opening formed in the power mechanism, and threadably attaching a second fastening element to the second dowel to secure the power mechanism to the vehicle door panel.

39. The method as defined in claim 33 further including the step of riveting or swaging the dowel to the vehicle door panel.

40. The method as defined in claim 21 further including the steps of forming a fixing feature separately from the first and second alignment features to secure at least one of the window regulator housing and power mechanism to the vehicle door panel, and forming the fixing feature as a projection on one of the window regulator housing, vehicle door panel, and power mechanism having tang for engagement with another of the window regulator housing, vehicle door panel, and power mechanism.

41. The method as defined in claim 21 including simultaneously forming the first and second alignment members by deforming a portion of the vehicle door panel to form a projection on the one side of the vehicle door panel and a corresponding recess on the opposite side of the vehicle door panel wherein one of the first alignment member and second alignment member comprises an outwardly extending surface of the projection and the other of the first alignment member and second alignment member comprises an inwardly extending surface that defines the corresponding recess.

42. The method as defined in claim 21 including assembling one of the window regulator housing and power mechanism to the vehicle door panel without having to hold the other of the window regulator housing and power mechanism in place relative to the one of the window regulator housing and power mechanism.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None